**Amendments to the Claims**:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A pulse generating circuit for successively outputting a pulse of positive polarity and a pulse of negative polarity, comprising:

a transformer ~~(14)~~ and a single switch ~~(16)~~ which are connected in series across a DC power supply ~~(12)~~;

wherein an output is produced across a secondary winding ~~(18)~~ of said transformer ~~(14)~~.

2. (Currently Amended) A pulse generating circuit according to claim 1, wherein either one of the pulse of positive polarity and the pulse of negative polarity is output in a period during which said switch ~~(16)~~ is turned on, and a pulse of opposite polarity is output due to electromotive forces induced when said switch ~~(16)~~ is turned off.

3. (Currently Amended) A pulse generating circuit according to claim 2, wherein if said DC power supply ~~(12)~~ has a power supply voltage V, said transformer ~~(14)~~ has a winding ratio n and a primary inductance value L1, and a current flowing through a primary winding ~~(22)~~ of said transformer ~~(14)~~ is cut off at a rate (di/dt), then the pulse output in the period during which said switch ~~(16)~~ is turned on has a pulse voltage determined by nV, and the pulse of opposite polarity has a pulse voltage determined by nL1(di/dt).

4. (Currently Amended) A pulse generating circuit according to ~~any one of claims 1 through 3~~claim 1, further comprising:

a capacitor ~~(26)~~ connected in parallel to said switch ~~(16)~~.

5. (Currently Amended) A pulse generating circuit according to ~~any one of claims 1 through 4~~claim 1, wherein a capacitive load ~~(30)~~ is connected across said secondary winding ~~(18)~~, further comprising:

a diode ~~(32)~~ connected in parallel to said switch ~~(16)~~ in a reverse orientation.

6. (Currently Amended) A pulse generating circuit according to ~~any one of claims 1 through 5~~claim 1, wherein said switch ~~(16)~~ comprises a semiconductor switch.